## PWS ID# 3003303 301 N 1<sup>st</sup> Street Altus AFB, OK 73521

6 June 12

Re:

2011 Annual Water Quality Report (Consumer Confidence Report)

Dear Water Customer:

Altus Air Force Base purchases water from the City of Altus and provides safe drinking water to your homes. The attached report from the City of Altus water system and the table below show the quality of your water. We are required to collect and test bacteria, lead, and copper samples in addition to those already tested by the City of Altus. No bacteria were detected in the samples collected in 2011. Additionally, lead and copper sampling showed all samples were below acceptable levels.

Altus AFI	B Monitoria	ng period of	January 1 <sup>s</sup>	thru De	ecember 3	1 <sup>st</sup> , 2011
Microbiological Monito	ring Result	S				
Contaminant	Violation Y/N	Range Detected	Level Reported	MCL1	MCLG <sup>2</sup>	Likely Source of Contamination
Total Coliform Bacteria (6 per month)	N	N/A	0	5%	0	Naturally present in the environment
Non-biological Monitori	ing Results					
Contaminant	Violation Y/N	Range Detected	Level Reported	MCL <sup>1</sup>	MCLG <sup>2</sup>	Likely Source of Contamination
Lead 90 <sup>th</sup> Percentile (ppb)	N	0.0-23.0	<7.8 <sup>3</sup>	15.0	0	Corrosion of household plumbing systems, erosion of natural deposits.
Copper 90 <sup>th</sup> Percentile (ppb)	N	10 - 1040	446 <sup>3</sup>	1300	0	Corrosion of household plumbing systems, erosion of natural deposits.
Total Trihalomethane (TTHM) (ppb)	Y <sup>4</sup>	152.1-176.9	176.9	80	0	By-product of drinking water chlorination.
Haloacetic Acids (HAA) (ppb)	N <sup>4</sup>	22.0-43.0	43.0	60	0	By-product of drinking water chlorination.

<sup>&</sup>lt;sup>1</sup>Maximum Contaminant Level – The MCL is the highest level of contaminant allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

Altus AFB will be required to comply with the disinfection by-product rule (DBPR) starting in 2014. The requirement will be the rolling 4-quarter average must not exceed the TTHM limit of 80 ppb nor the HAA limit of 60 ppb. Altus AFB began TTHM sampling in December 2011 ahead of the EPA requirements that go into effect in 2014. Since sampling started in December, there was only one quarter this year to base presumptive results on. It is anticipated Altus AFB would be exceeding the TTHM standard if it were in effect for our distribution system. The City of Altus has been addressing the problem of TTHM levels in our drinking water for many years. This past year TTHM levels have been exacerbated by historically high water demands, draught, and unusually high water temperature. The City of Altus also has pending upgrades to the treatment plant which should decrease the TTHM levels. Altus AFB is also reviewing our own treatment options to address the TTHM concerns. We will continue

<sup>&</sup>lt;sup>2</sup>Maximum Contaminant Level Goal – The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

<sup>&</sup>lt;sup>3</sup>Level 90 percent of samples are at or below

<sup>&</sup>lt;sup>4</sup>Presumptive. Not required to be in compliance until 2014

monitoring TTHM levels ahead of required compliance dates until the contaminant is mitigated to acceptable levels. It is not anticipated HAA levels will be a concern for our distribution system and, subsequently, no further sampling ahead of the compliance period is projected.

TTHM levels did not pose an immediate risk. If they had, you would have been notified immediately. However, some people who drink water containing TTHM levels in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of cancer.

MCLs are set at very stringent levels, as close to MCLGs as current technologies can feasibly provide. MCLGs are based on the consumption of two liters of water everyday for a lifetime with no adverse non-carcinogenic health effects. Even the exceedance of a set MCLG or MCL does not mean a specific health effect will develop in humans. The risk of adverse health effects is increased however, typically by a chance less than one in ten-thousand.

See the attachment for summary sample results from the City of Altus in their 2011 Consumer Confidence Report (CCR). Decisions regarding your water treatment are made by the City of Altus. Meetings are held regularly on the first and third Tuesdays of each month at 6:30 p.m. in the city council chambers. Should you have any questions or concerns regarding your water and/or this report, please contact Bioenvironmental Engineering at (580) 481-5494.

Sincerely,

MICHAEL D. ADDY, Capt, USAF, BSC Chief, Bioenvironmental Engineering

Michael Dolo

Atch:

City of Altus Annual Water Quality Report 2011

# City of Altus Pubic Water System I.D. 1011501 Annual Water Quality Report 2011

We're pleased to present this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we provide. We want you to be aware of our continuing efforts to improve the water treatment process and protect our water resources. Our goal is to provide a safe high quality, and dependable supply of drinking water. We are committed to insuring the quality of your water. Our primary water source is The Mountain Park Conservancy District, which provides untreated water from Tom Steed Reservoir. The reservoir is located in southern Kiowa County approximately six miles north of Snyder, Oklahoma. Our emergency source of water is the Altus Reservoir, which is recharged from Lake Lugert-Altus located in eastern Greer and northwestern Kiowa County approximately 18 miles north of Altus. Both reservoirs are classified by the Environmental Protection Agency as "surface water sources". The Mountain Park Conservancy District has a source water protection plan with a copy available at our office that shows the vulnerability of our source water as HIGH. Additional information such as potential sources of contamination is listed. This plan is available for public view upon written request submitted to the office of Public Works at 509 S. Main, Altus OK 73521.

#### This report indicates the quality of our water and what it means to you.

Este informe contiene información muy importante sobre su aqua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

If you have any questions about this report or your water utility, please contact Gene Leister, Water Treatment Supervisor at 481-2270. We want all our customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first and third Tuesdays of each month at 6:30 p.m. in the city council chambers.

Altus Water Treatment personnel routinely monitor the drinking water for constituents according to Federal and State laws. The table below shows results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2011. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In the table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/l) Parts per billion (ppb) or Micrograms per liter (ug/l)

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

**Nephelometric Turbidity Unit (NTU)** - a nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level Goal (MCLG) -The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Contaminant Level (MCL)** - The MCL is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

		lic Water Supply 20			T	
Contaminant	Violation Yes/No	Highest Level Detected	Range Detected	MCL	MCLG	Likely Source of Contamination
		Microbiological	Contaminar	nts		
Total Coliform Bacteria	No	0		5 %	0	Naturally present in the environment
Turbidity (NTU)	No	TT=0.54 NTU  Less than 0.3 NTU's in 100% of monthly samples.	0.03-0.54	TT=5 NTU TT=Less than 0.3 NTU's in 95% of monthly samples	N/A	Soil runoff
		Volatile Organic	Contamina	tes		
TTHM (Total trihalomethanes (ppm)	Yes	.086 Highest quarterly avg.	.056112	.080	0	By-product of drinking water chlorination
		90	n <sup>2</sup>			*
THAA5 (Total haloacetic acids) (ppm)	No	.033 Highest quarterly avg.	.026046	.060	0	By-product of drinking water chlorination
		Inorganics Co	ntaminates			
Chlorites (ppm)	No	.91	.5591	1.0	0.8	Additive used to contro microbes
Fluoride (ppm)	No	.94	0.3294	4	4	Erosion of natural deposits, discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth.
Nitrate (ppm) (as Nitrogen)	No	.20	.2020	10	10	Runoff from fertilizer use, erosion of natural deposits.
Lead 90 <sup>th</sup> percentile (ppm)	No	.0078	0.0-0.023	.015	0	Corrosion of household plumbing systems, erosion of natural deposits.
Copper 90 <sup>th</sup> percentile (ppm)	No	0.446	.011.04	1.3	0	Corrosion of household plumbing systems, erosion of natural deposits.

Contaminate	Violation Yes/No	Highest Level Detected	Range Detected	MCL	MCLG	Likely Source of Contamination
Control of DBP precursors TOC (Avg. Yearly Ratio)	No	.96	.33-1.75	Minimum removal ratio 1.0	N/A	Naturally present in the environment

### Radiochemistry

Gross Beta Particle activity (pCi/L)	No	2.67 pCi/L	2.67-2.67	50	0	Decay of natural and man-made deposits.
Gross alpha Particle activity (pCi/L)	No	1.60	1.6-1.6	15	0	Erosion of natural Deposits.

#### What does this mean?

This table shows our system had one violation during the year. The violation was for exceeding the Total Trihalomethane (TTHM) limit of 80 ppb.

# TTHM violation What happened?

The drinking water produced has continually been improved during the past several years due to implemented operational changes. These changes continue to improve the quality of our water, however, the Environmental Protection Agency (EPA) has mandated increasingly more stringent regulations for THM reduction and other water quality parameters. The City of Altus has been addressing the problem of THM levels in our drinking water for many years. This past year THM levels have been exasperated by historically high water demands and unusually high water temperature. Additionally key elements of our treatment process were operating at less than 100% due to age dependant deterioration and pending upgrades.

The noted violations did not pose an immediate risk. If they had, you would have been notified immediately. However, some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of cancer.

#### What is being done?

- Samples collected during the past two quarterly sample periods have met EPA requirements for quarterly compliance.
- · Completed review of engineering study.
- Began planning for plant upgrade.

In response to national attention being given to Chromium-6 and its potential presence in some of the nation's water supplies. The City of Altus voluntarily tested both our source and treated water supply for the presence of Chromium-6. The test results did not indicate Chromium-6 in our source or treated water supply.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

#### Contaminants that may be present in source water before we treat it include:

\*Microbial contaminants, such as viruses and bacteria, which may come from agricultural, livestock operations, wildlife, sewage treatment plants and septic systems,.

\*Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

\*Pesticides and herbicides, which may come from a variety of sources such as agriculture and residential uses.

\*Radioactive contaminants, which are naturally occurring.

\*Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

\* MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water everyday at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer and undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Thank you for allowing us to continue providing your family with clean, quality water. In order to maintain a safe and dependable water supply we continually make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. We appreciate your support and understanding. Please call our office if you have questions. (580)-481-2270

\* Oklahoma Department of Environmental Quality Guidance dated 26 March, 2008.